

ABSTRACT

A porcine adipocyte-specific polypeptide, termed leptin, is expressed in the fat tissue of pigs. Expression may be altered in over fat pigs, or expression may be in the form of a protein of lesser biological activity relative to that of leaner pigs. The porcine adipocyte polypeptide, DNA and RNA molecules coding therefor, methods for its preparation, and antibodies specific for the polypeptide are disclosed. Methods for determining the susceptibility of a pig to fat deposition are based on measuring the levels of the porcine adipocyte polypeptide in a biological fluid or tissue extract or by measuring mRNA encoding the porcine adipocyte polypeptide in cells of the subject. Methods of evaluating an agent related to the deposition of fat in swine comprise contacting the agent with an adipocyte *in vitro* and measuring the amount of the porcine adipocyte polypeptide or mRNA that is produced by the adipocyte. Methods of limiting fat deposition include administering porcine leptin or porcine leptin DNA, and methods of regulating intake include administering porcine leptin, porcine leptin DNA, or an antibody directed against porcine leptin.